
DOE NEWS

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WASTE RETRIEVAL BEGINS FROM HANFORD'S 11TH SINGLE-SHELL TANK

CH2M HILL and the U.S. Department of Energy's Office of River Protection last night began retrieval of waste from another of Hanford's aging single-shell underground waste storage tanks. Tank C-110 is located in C Farm in the 200 East Area near the center of the 586 square-mile Hanford Site. It is a 530,000 gallon tank, built in 1946, and currently holds approximately 177,000 gallons of sludge and other radioactive and chemical waste materials.

"This work marks the eleventh single-shell tank to undergo waste retrieval at Hanford," said DOE ORP Assistant Manager for Tank Farms Stacy Charboneau. "Removing the waste from these single-shell tanks is a priority for ORP, a necessary step to protect the nearby Columbia River and prepare for future operations at Hanford's vitrification plant."

CH2M HILL is the prime contractor to DOE ORP and is responsible for the safe management of Hanford's tank waste until it can be prepared for disposal. The waste is contained in 149 single-shell tanks, many of which date back to the beginning of the Hanford Site. There are also 28 newer, safer double-shell tanks.

"Everyone involved in this project has done an outstanding job preparing for this retrieval and is committed to the safe and efficient removal of the waste from this tank," said Ryan Dodd, CH2M HILL Vice President for Retrieval and Closure Operations.

Waste from C-110 will be moved through a temporary, above-ground hose-in-hose transfer line to nearby double-shell tank AN-106, a distance of approximately 900 feet. Waste from the double-shell tanks will eventually be transferred to Hanford's vitrification plant for treatment. The above-ground transfer lines meet environmental regulations and avoid the time and expense of installing permanent infrastructure.

Retrieval of the waste from Tank C-110 is being accomplished using a technique known as modified sluicing which uses nozzles to spray the waste with liquid to mobilize it or otherwise break it up and move it to a pump for removal.

Workers have prepared for this retrieval for three months, incorporating lessons learned from last year's waste spill that occurred during retrieval of waste from Tank S-102. Changes include the installation of improved methods to detect any waste leaks along the waste retrieval transfer route. This includes not only detection of radiation but also includes being able to verify the presence of upset conditions without sending people into the area.

The first improvement was the installation of five new Waste Retrieval Remote Monitoring (WRRM) Camera Systems. The second was the Remote Area Radiation Monitors (RARM) system, which has been set up at 10 locations along the waste transfer route. The RARM system is a remotely-operated series of radiation detectors that have been installed along the waste transfer route. Developed by Hanford personnel in 2007 to be placed in areas where it isn't safe to send people on a regular basis, the RARM system uses off-the-shelf equipment to detect leaks and instantly transmit an alert to a nearby monitoring station. The cameras will monitor the areas where the RARM system is deployed and will feed images to operations personnel in the control area outside of C Farm.

The WRRM camera systems provide a remote camera surveillance capability and a high quality zoom camera with pan and tilt features. The WRRM system also includes a high intensity spotlight to observe potential leak locations. The cameras and the spotlights can be remotely operated from many locations during an emergency.

"Modified sluicing is a well-proven technique to retrieve waste from these tanks. Everything we do is focused on worker safety and protection of the environment and this job is no exception," Dodd said.

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